

MicroTCA Board Layout and Routing Specifications

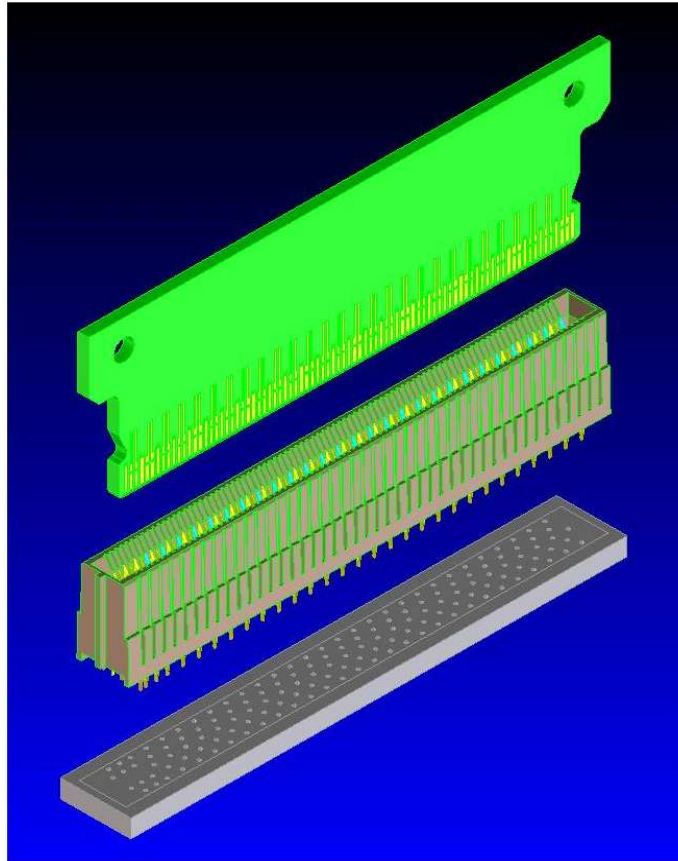


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REVISION: B	ECR/ECN INFORMATION: EC No: UCP2009-0441 DATE: 08/19/2008	TITLE: Board Layout and Routing For MicroTCA Connectors	SHEET No. 1 of 5
DOCUMENT NUMBER: AS-75594-100	CREATED / REVISED BY: Jason Squire	CHECKED BY: Dambach	APPROVED BY: Comerci

MicroTCA

Board Layout and Routing Specifications

1.0 SCOPE

The Board Layout and Routing Specification covers the Board layout and Routing used when determining the performance for the μ TCA printed circuit board (PCB) connector series. See 10 Gig Edge Connector SI Guideline (Document Number TS-75594) for test results.

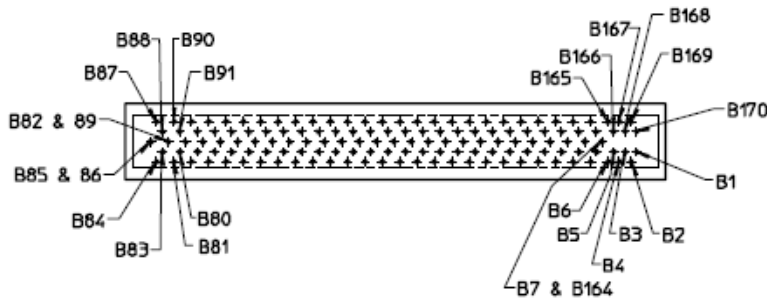
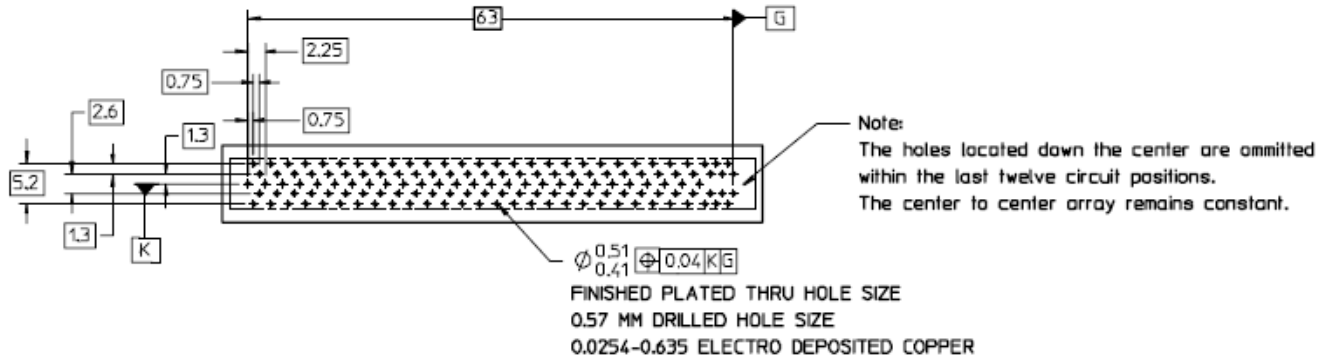
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2.0 CONNECTOR FOOTPRINT

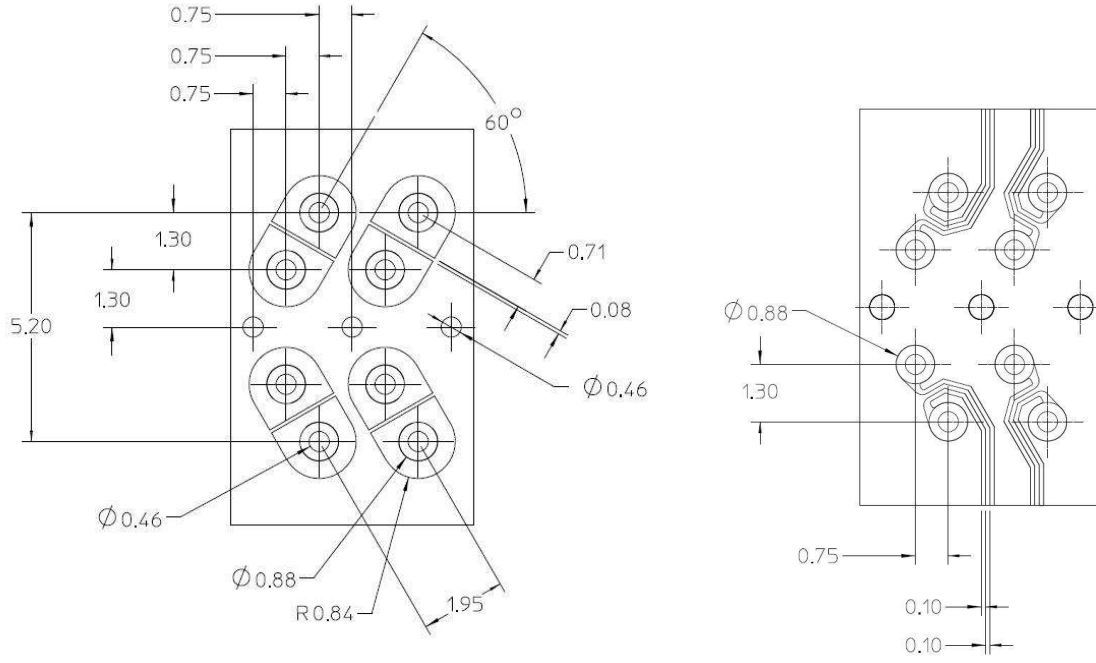
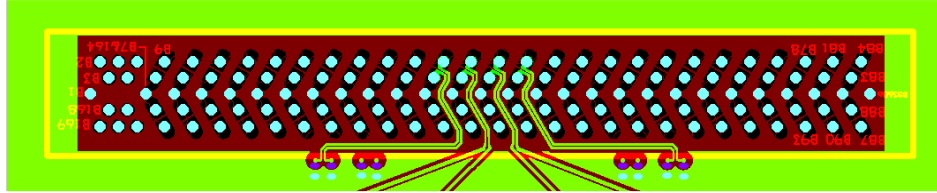


MOTHER BOARD HOLE LAYOUT

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3.0 ROUTING



BOARD DESCRIPTION

Material:	Nelco 4000-13SI
Thickness	Board 2.8mm (0.11") host, 1.58mm (0.062) module Copper 1/2oz. (signal layers)
Number of layers	12 for the host board, 8 for the module board
Signal layers	3, 5, 8 & 10 (host board), 3 & 6 (module board)
Trace widths	7.5 mil uncoupled strip-lines 5.8 - 5.5 - 5.8 mil coupled strip-lines

The above board description is based on the PCB design for the μ -TCA electrical test board.

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4.0 STANDARD NOTES

- 4.1 BOARD DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- 4.2 DIMENSIONS TOLERANCE SHALL BE +/- 0.13MM UNLESS OTHERWISE NOTED.
- 4.3 SEE BOARD STACK-UP FOR LAYER DETAILS AND FINISHED COPPER WEIGHTS.
- 4.4 BOARD MATERIAL SHALL BE NELCO 4000-13SI
- 4.5 BOARD THICKNESS SHALL BE 0.110" (INCHES) THK. +/- 10%.
- 4.6 ALL TRACE WIDTHS ON ARTWORK ARE FINISHED WIDTHS.
- 4.7 ALL TRACES TOLERANCE SHALL BE +/- 10% FINISHED UNLESS OTHERWISE NOTED
- 4.8 ALL TRACES SHALL BE IMPEDANCE CONTROLLED. SINGLE ENDED TRACES SHALL BE CONTROLLED TO 50 OHMS +/- 10% FINISHED UNLESS OTHERWISE NOTED. DIFFERENTIAL TRACES SHALL BE CONTROLLED TO 100 PHMS +/- 10% FINISHED UNLESS OTHERWISE NOTED. CALCULATIONS ARE BASED ON Dk=3.25
- 4.9 SOLDERMASK SHALL BE LIQUID PHOTO IMAGEABLE (LPI) BOTH SIDES OVER BARE COPPER.
- 9.10 SHALL BE COVERED (NOT TINTED) UNLESS NOTED OTHERWISE.
- 9.11 SOLDERMASK TOLERANCE SHALL BE +/- 0.002" (INCHES).
- 9.12 THERE SHALL BE NO SOLDERMASK COVERING SURFACE MOUNT LANDS OR THRU HOLE PADS.
- 9.13 SOLDERMASK COLOR SHALL BE DARK GREEN.
- 9.14 HOLE LOCATION TOLERANCE SHALL BE +/- 0.02MM UNLESS OTHERWISE NOTED.
- 9.15 HOLE SIZES IN CHART ARE FINISHED HOLE SIZES.
- 9.16 SILKSCREEN COLOR SHALL BE WHITE.
- 9.17 CENTER PIN ON SMA CONNECTORS SHALL BE FILLED WITH DUPONT CB-100 OR EQUIV. SILVER EPOXY CONDUCTIVE FILL.
- 9.18 EXPOSED COPPER SHALL BE IMMERSION GOLD PLATED OVER MAXIMUM 100 MICROINCHES NICKEL
- 9.19 IF APPLICABLE, "X"-OUTS ARE NOT ACCEPTABLE

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